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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/732,984 | 12/11/2003 | Kevin Kwong-Tai Chung | AL-TECH-15A | 8551 |

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EXAMINER

BUI, HUNG S

ART UNIT PAPER NUMBER

2841

DATE MAILED: 05/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

SM

Office Action Summary

Application No.

10/732,984

Applicant(s)

CHUNG ET AL.

Examiner

Hung S. Bui

Art Unit

2841

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-48 is/are allowed.
- 6) ☒ Claim(s) 24-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 24-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Kreft [US 6,008,993].

Regarding claim 24, Kreft discloses a method of making an electronic assembly comprising the steps of:

- providing an insulating substrate (1) for the electronic assembly having an electrical conductor thereon (3), wherein the electrical conductor defining an antenna connected to first and second contact sites spaced apart substantially a predetermined distance (figure 2);
- providing an insulating electronic circuit substrate (2) having a length substantially the predetermined distance between first and second ends (figure 2), having first and second contact sites substantially at the first and second ends thereof, respectively, and having first and second terminals (figure 2) respectively connected to the first and second contact sites thereof;
- mounting an electronic device (5) to the electronic circuit substrate, wherein the electronic device having first and second electronic contacts

connected to the first and second terminals of the electronic circuit substrate and mounting the electronic circuit substrate to the insulating substrate with the first and second contact sites of the substrate electrically connecting with the first and second contact sites of the electronic circuit substrate (column 5, line 59-column 6, line 12).

Regarding claims 25 and 27, Kreft provides the mounting of the electronic device onto the electronic circuit substrate by applying solder adhesive (7) to the first and second terminals of the insulating electronic circuit substrate (figure 2).

Regarding claims 26 and 28, Kreft further discloses the method of mounting the electronic device by using heating the solder to a melting temperature (column 6, lines 28-39).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kreft in view of Kobayashi [US 6,629,366].

Regarding claim 29, Kreft discloses everything claimed except the specific disclosure of the insulating electronic circuit substrate being formed of a substrate of material that is dimensionally stable at the melting temperature.

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Kobayashi discloses a substrate (44, figure 2d) for mounting an electronic component formed of a dimensionally stable material (column 6, lines 18-37).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use dimensionally stable material for the electronic substrate of Kreft, as suggested by Kobayashi, for the purpose of improving the stiffness of the substrate during manufacture.

5. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kreft in view of Covell, II et al. [US 5,718,367].

Regarding claim 30, Kreft discloses everything claimed except the specific disclosure of the insulating electronic circuit substrate being formed of a substrate of material that is not dimensionally stable at the melting temperature.

Covell, II et al. disclose a substrate having a dimensional stability depending upon the compatibility with the manufacturing temperatures and thermal expansion characteristics (column 10, lines 38-43).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a dimensionally unstable material for the substrate of Kreft, as suggested by Covell, II et al., for the purpose of improving solder reflow.

6. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kreft in view of Credelle et al. [US 6,606,247].

Regarding claim 31, Kreft discloses the insulating substrate (1) for the electronic assembly having an electrical conductor thereon (3), wherein the electrical conductor defining an antenna connected to first and second contact sites spaced apart substantially a predetermined distance (figure 2).

Kreft discloses the instant claimed invention except for the electrical conductor formed of elongate shape.

Credelle et al. disclose the insulating substrate having an electrical conductor with an elongated form (figure 3).

It would have been obvious to a person having ordinary skill in the art at the time invention was made that to use an elongated electronic conductor in Kreft, as suggested by Credelle et al., for the purpose of increasing the antenna sensitivity.

Allowable Subject Matter

7. Claims 32-48 are allowed.

8. The following is an examiner's statement of reasons for allowance: The prior art of record does not teach or suggest, in the claimed combination, providing a set of electronic devices each having a substrate with an electrical conductor thereon wherein the electrical conductor includes two contacts spaced apart a predetermined distance and providing an electronic jumper having two contacts spaced apart substantially the same predetermined distance as the contacts on the substrate, wherein the jumper includes an electronic device mounted thereon having two contacts connected to the contacts of the jumper where for each article of the set the electronic device is on and

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connected to the electronic jumper which is none and connected to the electrical conductor of the substrate. Haghiri-Teharani et al., US 5,880,934, disclose the provision of an electronic article on a substrate including a jumper having spaced contacts to jump two contacts on the substrate, but Haghiri-Teharani et al. fails to teach the jumper providing separation of the substrate into individual electronic articles. Eberhardt et al., US 6,091,332, fails to teach the use of a jumper to interconnect and separate electronic articles on a substrate. The connection technique of Haghiri-Teharani et al. is not combinable with Eberhardt et al.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

9. Applicant's arguments filed 03-03-05 have been fully considered but they are not persuasive.

Applicant argues that Kreft or Kobayashi require the use of a "dimensionally stable" material for the substrate. Applicant merely claims that the substrate "need not" be of a material that is "dimensionally stable." Applicant does not preclude that the material used for the substrate can be the dimensionally stable material shown by the prior art.

Conclusion

10. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung S. Bui whose telephone number is (571) 272-2102. The examiner can normally be reached on Monday-Friday 8:30AM-6:00PM.

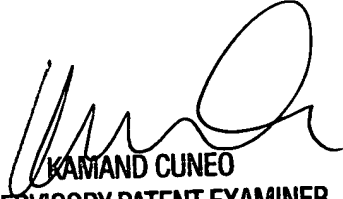
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571) 272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

5/13/05

HB



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